

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332317-940

Luminaire Tested: **S123RDIP-S775D805U940-4F0-1E-UDD-F4**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P332317-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-17,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S123RDIP-S775D805U940-4F0-1E-UDD-F4
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE
DOWNLIGHT 775 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED
HOUSING
UPLIGHT 805 LUMENS PER FOOT, BATWING OPTIC
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5194.5 lumens
Efficiency: N/A
Efficacy: 113.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.06 / 1.22
Luminous Opening: Rectangular (W 0.25' x L: 4' x H: 0')
CIE Type: General Diffuse

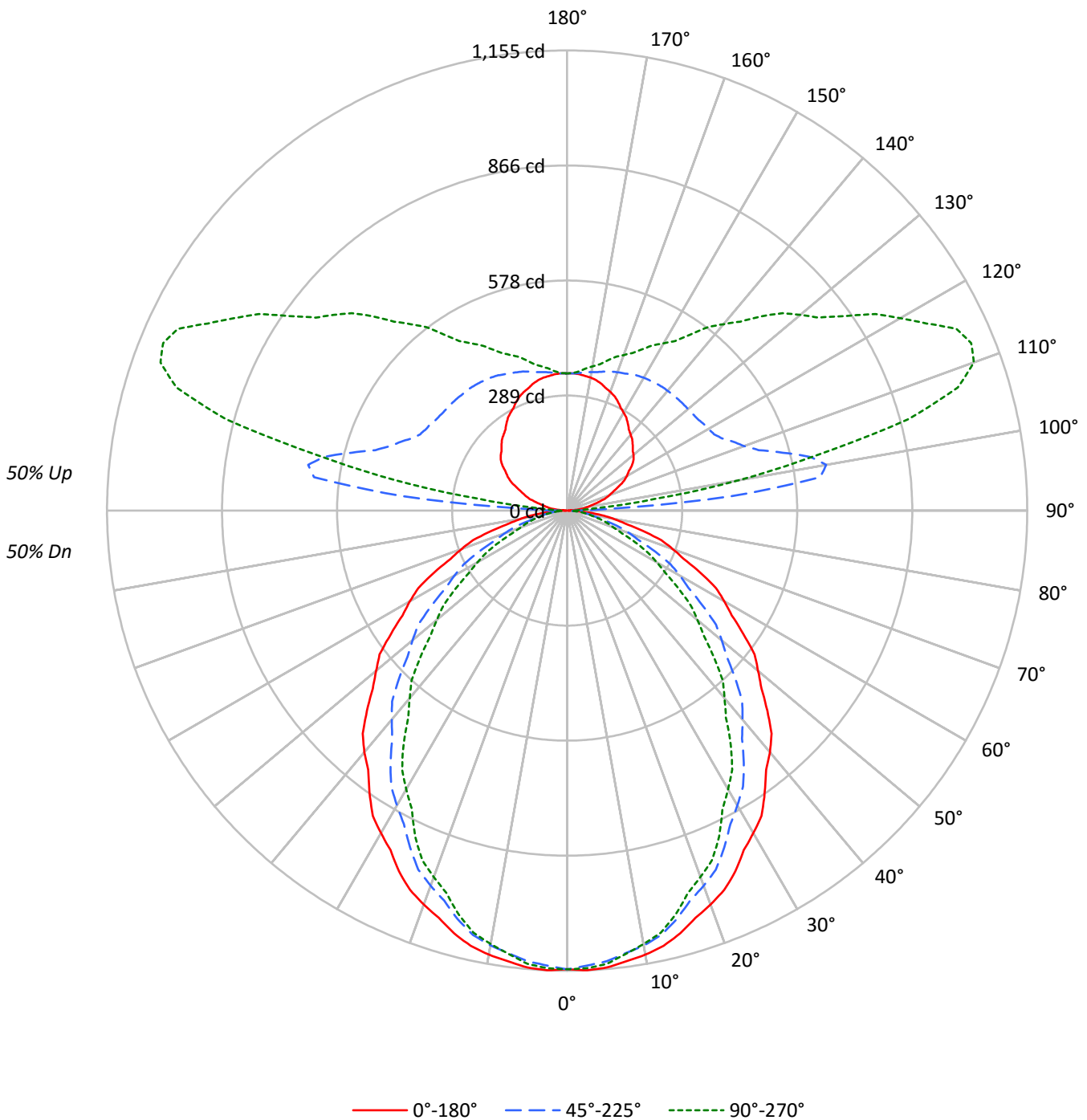
Input Watts (W): 45.9
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

Luminous Intensity Polar Plot





TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	94	90	87	90	87	84	81	74	71	69	61	60	58	50	49	48	43
2	90	82	76	71	82	76	71	67	65	61	58	54	52	49	45	43	41	36
3	82	73	66	60	75	67	61	56	57	53	49	48	45	42	40	37	35	31
4	75	65	57	51	69	60	53	48	51	46	42	43	39	36	36	33	31	27
5	69	58	50	44	64	54	47	41	46	41	36	39	35	32	32	29	27	24
6	64	52	44	38	59	48	41	36	42	36	32	35	31	28	29	26	24	21
7	59	47	39	34	54	44	37	32	38	32	28	32	28	25	27	24	21	19
8	55	43	35	30	51	40	33	28	34	29	25	29	25	22	25	22	19	17
9	51	39	32	27	47	36	30	25	32	26	23	27	23	20	23	20	17	15
10	48	36	29	24	44	34	27	23	29	24	20	25	21	18	21	18	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12392	12392	12392
5°	12440	12268	12338
10°	12369	12114	12073
15°	12237	11830	11705
20°	12054	11475	11208
25°	11866	11077	10723
30°	11616	10618	10038
35°	11361	10159	9410
40°	11126	9617	8633
45°	10816	9082	7931
50°	10474	8473	7145
55°	10128	7781	6412
60°	9810	7035	5608
65°	9393	6230	4804
70°	8875	5231	3877
75°	8114	4117	3647
80°	7234	3651	3353
85°	6113	3223	3001



TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.1	2.1
10°-20°	300.8	5.8
20°-30°	433.1	8.3
30°-40°	487.9	9.4
40°-50°	466.7	9.0
50°-60°	382.2	7.4
60°-70°	257.9	5.0
70°-80°	129.7	2.5
80°-90°	37.0	0.7
90°-100°	191.7	3.7
100°-110°	542.7	10.4
110°-120°	533.9	10.3
120°-130°	425.8	8.2
130°-140°	335.7	6.5
140°-150°	250.6	4.8
150°-160°	174.7	3.4
160°-170°	102.6	2.0
170°-180°	33.4	0.6
0°-30°	842.0	16.2
0°-40°	1329.9	25.6
0°-60°	2178.8	41.9
0°-90°	2603.4	50.1
90°-120°	1268.2	24.4
90°-150°	2280.4	43.9
90°-180°	2591.0	49.9
0°-180°	5194.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1151	1151	1151	1151	1151	
5°	1151	1146	1135	1143	1142	109
15°	1098	1087	1062	1057	1050	309
25°	999	975	933	914	903	459
35°	865	830	773	734	716	541
45°	710	667	597	545	521	548
55°	540	492	415	362	342	484
65°	369	316	245	201	189	365
75°	195	150	99	90	88	208
85°	50	30	26	24	24	56
90°	1	8	17	20	20	4
95°	24	77	413	121	81	26
105°	81	120	560	980	887	86
115°	143	178	429	940	1078	141
125°	199	235	400	725	850	176
135°	233	278	395	597	690	180
145°	266	304	390	490	539	166
155°	302	326	377	429	447	139
165°	330	339	361	383	390	93
175°	344	344	346	351	351	33
180°	344	344	344	344	344	



TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1154.9	1154.3	1153.6	1153.0	1152.4	1151.0	1149.0	1147.0	1145.0	1143.0	1144.9
5°	1151.3	1150.2	1149.1	1148.2	1147.1	1145.3	1142.8	1140.3	1137.8	1135.4	1137.2
7.5°	1140.6	1139.5	1138.4	1137.2	1136.1	1133.9	1130.7	1127.5	1124.3	1121.0	1122.0
10°	1131.7	1130.2	1128.7	1127.3	1125.8	1123.2	1119.5	1115.8	1112.1	1108.3	1108.5
12.5°	1118.9	1117.3	1115.7	1114.1	1112.5	1109.4	1104.8	1100.3	1095.6	1091.1	1091.0
15°	1098.1	1095.7	1093.4	1091.2	1088.9	1084.9	1079.1	1073.3	1067.4	1061.6	1060.6
17.5°	1071.7	1069.1	1066.4	1063.7	1061.0	1056.1	1048.7	1041.3	1033.8	1026.5	1024.3
20°	1052.3	1048.9	1045.6	1042.3	1039.0	1033.4	1025.5	1017.6	1009.8	1001.8	999.2
22.5°	1030.6	1026.8	1023.0	1019.1	1015.3	1009.2	1000.9	992.5	984.1	975.7	972.3
25°	999.1	993.9	988.6	983.5	978.3	970.9	961.4	951.8	942.3	932.7	928.4
27.5°	960.7	955.0	949.3	943.6	937.9	929.7	919.1	908.5	897.8	887.2	881.1
30°	934.6	928.4	922.2	916.0	909.7	900.8	889.2	877.5	865.9	854.3	847.3
32.5°	908.5	901.4	894.4	887.3	880.3	870.6	858.3	846.1	833.7	821.4	813.8
35°	864.6	857.1	849.6	842.2	834.7	824.6	811.7	798.8	786.0	773.1	764.2
37.5°	820.2	811.8	803.5	795.2	786.9	776.0	762.2	748.5	734.8	721.0	710.9
40°	791.8	782.7	773.5	764.4	755.3	743.3	728.6	713.9	699.1	684.4	673.6
42.5°	759.6	750.6	741.4	732.3	723.2	711.0	695.7	680.5	665.3	650.1	638.3
45°	710.5	701.2	691.9	682.5	673.2	660.6	644.5	628.6	612.6	596.6	584.8
47.5°	661.5	651.2	641.0	630.7	620.5	607.3	591.4	575.3	559.4	543.4	530.6
50°	625.5	615.8	606.1	596.3	586.6	573.3	556.5	539.7	522.9	506.0	493.2
52.5°	593.4	582.9	572.3	561.7	551.2	537.5	520.8	504.3	487.6	470.9	457.6
55°	539.7	529.5	519.3	509.2	499.0	485.1	467.4	449.9	432.2	414.6	402.5
57.5°	490.0	478.9	467.9	456.7	445.7	431.3	413.6	395.8	378.1	360.4	349.0
60°	455.7	444.3	432.8	421.4	410.0	395.7	378.4	361.2	344.0	326.8	315.6
62.5°	421.2	409.8	398.4	387.0	375.7	361.3	344.1	326.9	309.7	292.4	281.9
65°	368.8	357.4	346.0	334.6	323.2	309.3	293.2	277.0	260.8	244.6	234.4
67.5°	316.4	304.8	293.3	281.7	270.2	256.6	241.1	225.6	210.1	194.6	187.0
70°	282.0	270.8	259.6	248.3	237.2	224.3	209.7	195.3	180.7	166.2	158.9
72.5°	247.6	236.6	225.5	214.5	203.5	191.4	178.2	165.0	151.8	138.6	132.6
75°	195.1	185.2	175.2	165.2	155.3	144.6	133.2	121.8	110.4	99.0	96.9
77.5°	147.3	138.3	129.3	120.3	111.3	103.2	95.8	88.5	81.1	73.7	72.7
80°	116.7	108.2	99.7	91.2	82.7	76.2	71.9	67.5	63.2	58.9	58.2
82.5°	87.6	80.3	72.9	65.5	58.2	53.5	51.5	49.4	47.4	45.4	44.8
85°	49.5	44.9	40.4	35.8	31.2	28.6	28.0	27.4	26.8	26.1	25.8
87.5°	18.2	16.7	15.1	13.7	12.1	11.5	11.9	12.4	12.8	13.2	12.9
90°	1.4	2.8	4.2	6.2	7.7	9.1	11.1	13.3	15.3	17.4	16.8
92.5°	8.6	12.8	18.7	24.2	30.0	40.3	58.6	88.5	118.0	107.2	80.9
95°	23.7	25.8	33.4	45.3	63.4	90.6	149.9	253.8	368.1	413.4	335.4
97.5°	40.4	41.1	47.2	57.4	75.3	104.7	161.3	278.5	469.0	640.7	685.5
100°	51.6	52.3	57.2	67.0	83.6	110.8	159.6	262.8	446.2	660.2	797.5
102.5°	63.3	64.6	68.8	78.1	93.2	118.1	161.8	249.4	412.7	623.9	803.2
105°	80.9	82.9	87.1	95.5	108.8	130.4	168.0	239.8	371.6	560.5	760.6
107.5°	99.5	101.7	105.7	113.9	126.4	146.4	179.4	239.2	345.4	504.4	686.2
110°	113.0	115.0	118.5	126.2	138.0	157.6	189.0	241.9	335.4	472.7	639.3



TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	125.2	127.3	130.8	138.5	150.3	169.2	198.4	247.4	329.8	451.5	598.6
115°	142.9	145.7	149.9	156.9	168.7	187.5	214.0	256.5	327.7	428.7	549.4
117.5°	160.6	163.8	167.3	173.7	187.0	204.4	230.6	268.6	329.0	415.4	519.7
120°	172.9	175.0	178.4	185.5	198.7	216.2	241.2	277.5	331.2	409.2	504.1
122.5°	183.5	185.6	189.0	196.6	209.3	227.8	252.4	285.8	335.0	405.4	491.2
125°	198.7	200.1	204.3	212.0	225.2	244.0	268.4	299.1	340.9	400.2	474.7
127.5°	210.3	212.3	217.5	225.3	240.0	258.8	282.3	310.0	347.6	397.7	460.3
130°	217.5	219.6	225.9	234.3	248.9	267.7	290.7	317.2	352.0	396.0	452.5
132.5°	223.1	225.8	232.6	242.6	257.3	275.5	297.9	323.9	355.4	395.4	445.2
135°	232.8	235.7	243.3	253.8	268.4	287.2	308.8	332.5	360.4	394.6	435.7
137.5°	242.0	245.0	252.5	263.7	278.1	295.6	316.4	338.9	363.8	393.1	427.5
140°	248.2	251.6	258.7	269.8	283.7	301.1	321.4	342.3	366.0	392.5	422.5
142.5°	254.9	257.8	265.4	275.4	289.4	305.6	325.3	345.6	367.7	391.4	418.0
145°	265.6	267.7	274.0	284.5	296.3	312.4	330.5	349.3	368.8	389.7	412.1
147.5°	276.5	277.8	283.9	292.9	304.3	318.1	334.7	351.5	368.8	387.1	406.2
150°	283.7	284.5	290.0	299.1	308.8	321.4	337.4	352.0	368.8	384.9	402.3
152.5°	291.0	291.1	296.7	304.7	313.3	325.3	339.1	353.2	367.1	382.0	397.8
155°	301.8	301.8	306.0	313.0	320.7	330.5	342.3	353.5	365.3	377.2	391.1
157.5°	310.5	311.0	314.4	320.6	327.1	334.7	344.1	354.2	362.9	372.8	383.6
160°	317.2	317.2	320.0	325.6	330.5	337.4	345.8	354.2	361.9	369.5	378.5
162.5°	322.3	322.3	324.5	329.0	333.2	339.1	346.3	353.6	359.6	366.1	373.5
165°	329.8	329.0	330.5	333.9	336.7	341.6	347.1	352.0	356.2	361.1	366.7
167.5°	335.5	334.7	335.4	338.0	339.9	343.0	347.1	351.0	352.9	356.1	360.2
170°	338.9	337.4	338.1	340.2	341.6	343.0	346.5	349.3	350.7	352.8	356.2
172.5°	341.1	340.2	340.4	341.9	342.7	343.6	346.5	348.7	349.0	350.0	352.3
175°	343.7	343.0	342.3	343.7	343.7	344.4	345.8	347.1	346.5	346.5	347.9
177.5°	344.9	344.4	343.8	344.4	344.4	344.4	344.9	346.1	344.9	344.4	344.9
180°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4



TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3	1151.3
2.5°	1146.7	1148.5	1150.3	1151.1	1150.8	1150.4	1150.0	1149.8
5°	1139.1	1140.9	1142.8	1143.5	1143.2	1142.7	1142.3	1141.9
7.5°	1123.1	1124.1	1125.2	1125.3	1124.6	1123.9	1123.2	1122.5
10°	1108.8	1108.9	1109.1	1108.8	1107.7	1106.6	1105.6	1104.6
12.5°	1090.8	1090.7	1090.7	1089.9	1088.8	1087.5	1086.4	1085.1
15°	1059.5	1058.5	1057.5	1056.2	1054.8	1053.3	1051.9	1050.4
17.5°	1022.1	1019.9	1017.7	1015.6	1013.3	1011.2	1009.1	1006.9
20°	996.5	993.7	991.0	988.5	986.0	983.5	981.0	978.5
22.5°	969.0	965.6	962.2	959.4	957.1	954.8	952.4	950.1
25°	924.1	919.7	915.3	912.0	909.7	907.4	905.2	902.9
27.5°	875.0	869.1	863.0	858.2	854.7	851.2	847.7	844.3
30°	840.3	833.1	826.1	820.9	817.6	814.3	810.9	807.6
32.5°	806.0	798.3	790.6	785.0	781.5	778.0	774.5	771.1
35°	755.3	746.4	737.4	731.1	727.4	723.6	719.9	716.1
37.5°	700.7	690.6	680.5	673.2	668.5	663.9	659.3	654.7
40°	662.8	652.0	641.2	633.5	628.7	623.9	619.1	614.4
42.5°	626.4	614.7	602.9	594.9	590.6	586.3	582.0	577.7
45°	573.0	561.2	549.3	540.9	535.9	530.9	526.0	521.0
47.5°	517.6	504.8	492.0	483.3	478.8	474.4	470.0	465.6
50°	480.4	467.4	454.6	445.8	441.0	436.2	431.5	426.7
52.5°	444.3	430.9	417.5	408.7	404.4	400.1	395.8	391.6
55°	390.5	378.4	366.4	358.3	354.2	350.0	345.9	341.7
57.5°	337.7	326.3	315.0	307.5	304.0	300.4	296.9	293.4
60°	304.3	293.2	282.0	274.6	271.1	267.5	264.0	260.5
62.5°	271.3	260.8	250.3	243.2	239.4	235.8	232.1	228.4
65°	224.3	214.1	203.9	197.7	195.5	193.1	190.9	188.6
67.5°	179.4	171.8	164.2	159.2	156.8	154.3	151.9	149.4
70°	151.7	144.4	137.1	132.4	130.1	127.8	125.6	123.2
72.5°	126.7	120.7	114.9	111.4	110.4	109.5	108.5	107.5
75°	94.8	92.7	90.7	89.4	89.0	88.6	88.2	87.7
77.5°	71.5	70.4	69.3	68.5	68.1	67.7	67.2	66.9
80°	57.6	57.0	56.4	55.8	55.4	55.0	54.6	54.1
82.5°	44.1	43.5	42.9	42.5	42.4	42.4	42.3	42.2
85°	25.3	24.9	24.5	24.3	24.3	24.3	24.3	24.3
87.5°	12.8	12.8	12.8	12.9	12.7	12.6	12.6	12.2
90°	17.4	18.1	18.8	20.2	19.5	20.2	21.0	20.2
92.5°	58.7	46.5	41.1	37.5	36.3	34.2	34.9	33.6
95°	251.0	170.1	133.1	108.1	94.8	88.5	83.6	80.9
97.5°	625.6	501.1	411.2	327.8	276.3	245.0	226.1	220.2
100°	822.0	765.4	683.9	584.9	514.5	463.6	436.4	437.1
102.5°	887.2	885.4	837.9	775.1	720.3	680.0	657.3	641.2
105°	906.3	976.0	989.3	971.2	939.1	912.6	890.3	886.8
107.5°	851.4	964.6	1025.6	1050.4	1051.1	1042.1	1034.6	1028.1
110°	799.0	927.2	1015.0	1063.9	1083.3	1089.0	1087.5	1086.2



TEST NUMBER: P332317-940

CATALOG NUMBER: S123RDIP-S775D805U940-4F0-1E-UDD-F4

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	747.1	878.2	976.6	1039.3	1075.0	1092.3	1097.6	1097.9
115°	678.3	799.6	902.1	978.1	1030.4	1061.0	1075.0	1078.5
117.5°	628.6	733.3	825.3	902.4	956.9	992.0	1012.1	1016.9
120°	602.4	696.4	780.2	850.5	905.6	944.7	961.4	965.5
122.5°	581.8	666.9	744.4	809.9	858.7	893.9	912.3	917.6
125°	554.2	630.3	697.1	753.0	797.5	828.2	845.6	850.5
127.5°	530.3	598.0	658.4	709.2	748.9	775.1	790.9	795.3
130°	515.2	577.9	634.5	681.8	718.8	743.9	758.5	764.1
132.5°	501.2	559.0	611.5	656.7	691.4	716.6	729.5	733.4
135°	482.4	531.9	577.2	617.0	651.1	672.1	684.6	689.5
137.5°	465.3	505.9	544.9	579.3	608.1	629.3	639.9	643.1
140°	455.2	490.8	524.2	554.2	580.8	600.2	611.4	610.7
142.5°	445.8	476.3	505.3	531.4	553.9	571.2	581.3	580.6
145°	434.4	457.4	479.7	499.9	517.3	531.9	537.5	538.9
147.5°	425.0	443.3	461.3	475.6	488.8	498.7	504.1	504.6
150°	418.3	434.4	449.0	462.2	472.7	480.4	484.6	484.6
152.5°	412.1	426.0	438.9	450.0	458.2	465.3	467.8	467.8
155°	403.0	414.1	424.5	432.9	439.2	444.8	446.2	446.8
157.5°	393.2	402.5	410.6	417.1	422.6	426.8	427.9	427.8
160°	387.6	395.3	402.3	407.2	412.1	416.2	416.2	415.5
162.5°	380.9	387.4	393.9	398.2	401.4	405.0	405.0	404.4
165°	372.3	376.5	381.4	384.9	387.6	390.4	389.7	389.7
167.5°	364.7	367.9	370.8	373.3	374.5	376.5	375.8	375.8
170°	359.7	361.9	364.6	366.0	366.7	368.1	367.4	367.4
172.5°	355.3	356.8	359.0	359.9	360.0	361.4	360.2	359.6
175°	349.3	350.0	351.3	351.3	351.3	352.0	351.3	350.7
177.5°	345.5	346.1	346.6	346.6	346.1	346.6	345.5	345.5
180°	344.4	344.4	344.4	344.4	344.4	344.4	344.4	344.4

(END OF REPORT)